I E APPLICATION

Express Mail Label No.: EV 725 077 512 US

IN THE U.S. PATENT AND TRADEMARK OFFICE

July 1, 2005

Applicant(s): Hironobu ICHIMARU

For: FLUID SUPPLY/DISCHARGE HEAD OF BLADDER IN TIRE VULCANIZING MACHINE

Serial No.: Unknown Group: Unknown

Confirmation No.: Unknown

Filed: Unknown Examiner: Unknown

International Application No.: PCT/JP03/016833

International Filing Date: December 25, 2003

Atty. Docket No.: 4900.P0052US

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT BEFORE FIRST OFFICE ACTION

Sir:

Prior to issuance of the first Office Action in the above-identified application, kindly enter the following:

(Please see following pages.)

(MSTR112.DOC)

Amendments to the Specification

IN THE WRITTEN DESCRIPTION

Please replace the DISCLOSURE OF THE INVENTION section with the marked-up copy of the section enclosed herewith.

---~~DISCLOSURE~~SUMMARY OF THE INVENTION

In order to achieve the object mentioned above, in accordance with the present invention ~~(claim 1)~~, there is provided a fluid supply/discharge head of a bladder in a tire vulcanizing machine comprising

upper and lower metal molds and

the bladder expanded and contracted by supplying and discharging a fluid,

the bladder expanded by supplying the fluid being pressed to an inner surface of a green tire which is set to an inner portion of the metal molds,

~~wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head block,~~

~~the fluid discharge port is disposed on a lower side of the head block, the fluid supply port is disposed on an upper side of the head block, and the fluid discharge port and the fluid supply port are not disposed on the same plane.~~

wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head

block of a fluid supply/discharge head but are not disposed on the same plane,

the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block and is connected to a discharge hole formed in a bag head,

a communicating hole is formed to pass through the lower block, and

the fluid supply port is formed in the upper block and is connected to a supply hole formed in the bag head through an annular groove formed in the upper face of the lower block or a lower face of the upper block and the communicating hole.

In accordance with an aspect ~~(claim 2)~~, there is provided a fluid supply/discharge head of a bladder in a tire vulcanizing machine ~~according to claim 1~~, wherein the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block, the fluid supply port is formed in the upper block, and the fluid discharge port and the fluid supply port are not disposed on the same plane.

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Currently amended) A fluid supply/discharge head of a bladder in a tire vulcanizing machine comprising:

upper and lower metal molds; and

the bladder expanded and contracted by supplying and discharging a fluid,

the bladder expanded by supplying the fluid being pressed to an inner surface of a green tire which is set to an inner portion of the metal molds,

wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head block of a fluid supply/discharge head but are not disposed on the same plane,

the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block and is connected to a discharge hole formed in a bag head,

a communicating hole is formed to pass through the lower block, and

the fluid supply port is formed in the upper block and is connected to a supply hole formed in the bag head through an

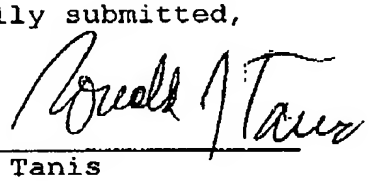
annular groove formed in the upper face of the lower block or a lower face of the upper block and the communicating hole~~, the fluid discharge port is disposed on a lower side of the head block, the fluid supply port is disposed on an upper side of the head block, and the fluid discharge port and the fluid supply port are not disposed on the same plane~~.

2. (Cancelled).

REMARKS

Entry of the foregoing amendment prior to issuance of the first Office Action is respectfully solicited. This amendment is intended to place the application in better form for consideration by the Examiner.

Respectfully submitted,



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Kevin L. Pontius Reg. No. 37 512
Sidney B. Williams, Jr. Reg. No. 24 949

Encl: None

112.08/04

PATE. APPLICATION

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Applicant(s): Hironobu ICHIMARU
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"C" amends tite 12/15/06 PS

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Filed: Unknown Examiner: Unknown
International Application No.: PCT/JP03/016833
International Filing Date: December 25, 2003
Atty. Docket No.: 4900.P0052US

"B" amends entered 7-7-05 ad

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upper and lower metal molds and

the bladder expanded and contracted by supplying and discharging a fluid,

the bladder expanded by supplying the fluid being pressed to an inner surface of a green tire which is set to an inner portion of the metal molds,

~~wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head block,~~

~~the fluid discharge port is disposed on a lower side of the head block, the fluid supply port is disposed on an upper side of the head block, and the fluid discharge port and the fluid supply port are not disposed on the same plane.~~

wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head

block of a fluid supply/discharge head but are not disposed on the same plane,

the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block and is connected to a discharge hole formed in a bag head,

a communicating hole is formed to pass through the lower block, and

the fluid supply port is formed in the upper block and is connected to a supply hole formed in the bag head through an annular groove formed in the upper face of the lower block or a lower face of the upper block and the communicating hole.

In accordance with an aspect ~~(claim 2)~~, there is provided a fluid supply/discharge head of a bladder in a tire vulcanizing machine ~~according to claim 1~~, wherein the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block, the fluid supply port is formed in the upper block, and the fluid discharge port and the fluid supply port are not disposed on the same plane.

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Currently amended) A fluid supply/discharge head of a bladder in a tire vulcanizing machine comprising:

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the bladder expanded by supplying the fluid being pressed to an inner surface of a green tire which is set to an inner portion of the metal molds,

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the head block is formed of a lower block and an upper block mounted to an upper face of the lower block,

the fluid discharge port is formed in the lower block and is connected to a discharge hole formed in a bag head,

a communicating hole is formed to pass through the lower block, and

the fluid supply port is formed in the upper block and is connected to a supply hole formed in the bag head through an

annular groove formed in the upper face of the lower block or a lower face of the upper block and the communicating hole~~,~~

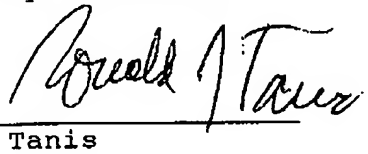
~~the fluid discharge port is disposed on a lower side of the head block, the fluid supply port is disposed on an upper side of the head block, and the fluid discharge port and the fluid supply port are not disposed on the same plane~~.

2. (Cancelled).

REMARKS

Entry of the foregoing amendment prior to issuance of the first Office Action is respectfully solicited. This amendment is intended to place the application in better form for consideration by the Examiner.

Respectfully submitted,



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Encl: None

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"A" amends entered 7-7-05 ad

Commissioner for Patents
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PRELIMINARY AMENDMENT CANCELING CLAIMS

Sir:

Prior to calculation of the filing fee in the above-identified application, kindly enter the following:

(Please see following pages.)

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Original) A fluid supply/discharge head of a bladder in a tire vulcanizing machine comprising:

upper and lower metal molds; and

the bladder expanded and contracted by supplying and discharging a fluid,

the bladder expanded by supplying the fluid being pressed to an inner surface of a green tire which is set to an inner portion of the metal molds,

wherein a fluid supply port and a fluid discharge port open to face an inside of the bladder are formed in a head block,

the fluid discharge port is disposed on a lower side of the head block, the fluid supply port is disposed on an upper side of the head block, and the fluid discharge port and the fluid supply port are not disposed on the same plane.

2. (Cancelled).

Remarks

This amendment cancels claim(s) to reduce the filing fee. Please enter this amendment before calculating the filing fee.

Respectfully submitted,

Ronald J. Tanis

RJT/ad

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Encl: None

111.10/03

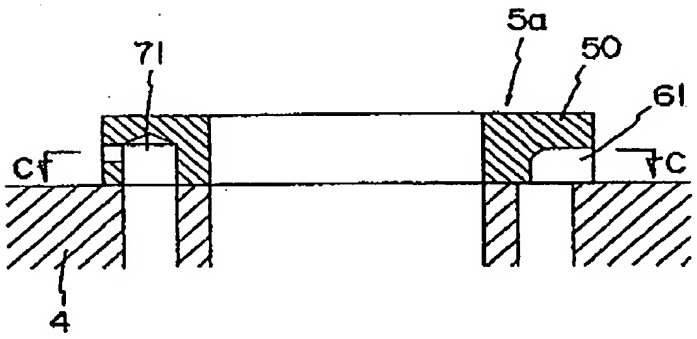
U.S. Serial No. 10/541 658

ABSTRACT

By increasing an area of the fluid discharge ports to increase a discharge capacity, drain water can quickly be discharged. Furthermore, the number of fluid supply ports is increased and the ports are equally spaced to thereby quickly and uniformly fill a heated steam or the like into a bladder. As a result, it is possible to reduce a cycle time of a tire vulcanizing step to thereby increase productivity in a fluid supply/discharge head of the bladder in a tire vulcanizing machine. In the tire vulcanizing machine, the fluid supply ports ~~71~~ and the fluid discharge ports ~~61~~ which are open to face an inside of the bladder are formed in the head block ~~50~~, the fluid discharge ports are disposed on the lower side of the head block, the fluid supply ports are disposed on the upper side of the head block, and the fluid discharge ports and the fluid supply ports are not disposed on the same plane.

Title: FLUID SUPPLY/DISCHARGE HEAD OF BLADDER IN TIRE VULCANIZING APPARATUS
Inventor(s): Hironobu ICHIMARU
Serial No.: 10/541 658
Docket No.: 4900.P0052US
Replacement Sheet

Fig. 5 (Prior Art)



Title: FLUID SUPPLY/DISCHARGE HEAD OF BLADDER IN TIRE VULCANIZING APPARATUS
Inventor(s): Hironobu ICHIMARU
Serial No.: 10/541 658
Docket No.: 4900.P0052US
Replacement Sheet

Fig. 6 (Prior Art)